

**ABSTRACT**

The present invention discloses a method and apparatus for efficiently and dynamically collecting and reporting performance metrics from components within a dynamic complex heterogeneous system, such as a content delivery network (CDN). Update messages containing fields for each metric to reported can be used to update the values for the metric associated with each component or entity in the system. For each field within a message communicating updated values of metrics, codes can be predefined. Update messages can contain updated metric values and/or predefined codes. By using these predefined codes, more than one agent can be used to interrogate and report determined and undetermined values for a specified component within the system to collect information. For example, a update message having five fields can be used to update 5 corresponding performance metrics. In a interrogation by a first agent, a first update message can contain actual updated values in the first, second and third fields of the metrics. Codes can be inserted into the fourth and fifth fields of the update message to instruct a recipient graphical display not the set these fields. In a second subsequent interrogation, a second update message can have actual updated values for the metrics represented in the fourth and fifth fields of the update message. The first, second and third data fields of the second update message can contain code instructing the recipient graphical display not the set these fields.